

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/541,750
Source: PCT
Date Processed by STIC: 07-19-2005

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.2.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.


Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

<u>ERROR DETECTED</u>	<u>SUGGESTED CORRECTION</u>	SERIAL NUMBER: <u>10/541,750</u>
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 _____ Wrapped Nucleics _____ Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 _____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 _____ Misaligned Amino _____ Numbering	The numbering under each 5 th amino acid is misaligned. Do not use tab codes between numbers: use space characters , instead.	
4 _____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5 _____ Variable Length	Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 _____ PatentIn 2.0 _____ "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 _____ Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 _____ Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional , please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 _____ Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa , and which residue n or Xaa represents.	
10 _____ Invalid <213> _____ Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11  _____ Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 _____ PatentIn 2.0 _____ "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 _____ Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>	



PCT

RAW SEQUENCE LISTING

DATE: 07/19/2005

PATENT APPLICATION: US/10/541,750

TIME: 15:19:21

Input Set : A:\Final Sequence list-13311-00009-US.txt

Output Set: N:\CRF4\07192005\J541750.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Matuschek, Markus
 4 Klein, Daniela
 5 Heinekamp, Thorsten
 6 Schmidt, Andre
 7 Brakhage, Axel
 8 Achatz, Brigitte
 10 <120> TITLE OF INVENTION: Method for producing carotenoids or their precursors using
 11 genetically modified organisms of the Blakeslea genus,
 12 carotenoids or their precursors produced by said method and use
 13 thereof
 15 <130> FILE REFERENCE: 13311-00009-US
 C--> 17 <140> CURRENT APPLICATION NUMBER: US/10/541,750
 C--> 17 <141> CURRENT FILING DATE: 2005-07-08
 17 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/000099
 18 <151> PRIOR FILING DATE: 2004-01-09
 20 <150> PRIOR APPLICATION NUMBER: DE 103 00 649.4
 21 <151> PRIOR FILING DATE: 2003-01-09
 23 <150> PRIOR APPLICATION NUMBER: DE 103 41 271.9
 24 <151> PRIOR FILING DATE: 2003-09-08
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 68 cacaaaagtc agacggcgta accaaaagtc acacaacaca agctgtaagg atttcggcac 900

(Pg-2)

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144 aataaaaacgc gttttcgggt ttacctcttc cagatacagc tcatctgcaa tgcattaatg 240
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160 ctccctatgag tcgtttaccc agaatgcaca ggtacacttg tttagaggta atccttcttt      720
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366 gcttggtcgg tcatttcgaa cccagagtc cgctcagaa gaactcgtca agaaggcgat 5340
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370 cccattcgcc gccaaactct tcagcaatat caccggtagc caacgctatg tcctgtagc 5460
372 ggtccgccac acccagccgg ccacagtcga tgaatccaga aaagcggcca tttccacca 5520
374 tgatattcgg caagcaggca tcgccatggg tcacgacgag atcatcgccg tcgggcatgc 5580
376 gcgccttgag cctggcgaa agttcggtg gcgcgagccc ctgatgctct tcgtccagat 5640
378 catcctgac gacaagaccg gcttccatcc gagtacgtgc tcgctcgatg cgatgtttcg 5700
380 cttggtggtc gaatgggcag gtagccggat caagcgtatg cagccgccgc attgcatcag 5760
382 ccatgatgga tactttctcg gcaggagcaa ggtgagatga caggagatcc tgccccggca 5820
384 cttcgcccaa tagcagccag tcccttcccg cttcagtgac aacgtcgagc acagctgcgc 5880
386 aaggaacgcc cgtcgtggcc agccacgata gccgcgctgc ctgctcctgc agttcattca 5940
388 gggcaccgga caggtcgggtc ttgacaaaaa gaaccggggc cccctgcgct gacagccgga 6000
390 acacggcggc atcagagcag ccgattgtct gttgtgccc gtcatagccg aatagcctct 6060
392 ccaccaagc ggccggagaa cctgcgtgca atccatcttg tcaatcatg cgaaacgatc 6120
394 cagatccggg gcagattatt tggattgaga gtgaatatga gactctaatt ggataccgag 6180
396 gggaaattat ggaacgtcag tggagcattt ttgacaagaa atatttgcta gctgatagt 6240
398 accttaggcg acttttgaac gcgcaataat ggtttctgac gtatgtgctt agtccattaa 6300
400 actccagaaa cccgcggctg agtggctcct tcaacgttgc ggttctgtca gttccaaacg 6360
402 taaaacggct tgtccgcgt catcgccggg ggtcataacg tgactccctt aattctccgc 6420
404 tcatgatcag attgtcgttt cccgccttca gtttaacta tcagtgtttg acaggatata 6480
406 ttggcggtta aacctagag aaaagagcgt ttattagaat aatcggatat taaaagggc 6540
408 gtgaaaagg tttatccgttc gtccatttgt atgtgcatgc caaccacagg gttccccaga 6600
410 tctggcgccg gccagcgaga cgagcaagat tggccgcgc cggaaacgat ccgacagcgc 6660
412 gccagcaca ggtgcgcagg caaattgcac caacgcatac agcggccagca gaatgccata 6720
414 gtgggcggtg acgtcgttcg agtgaaccag atcgcgagg agggccggca gcaccggcat 6780
416 aatcaggccg atgcgcagag cgtcgagcgc gacagtgtc agaattacga tcaggggtat 6840
418 gttgggtttc acgtctggcc tccggaccag cctccgctgg tccgattgaa cgcgcggatt 6900
420 ctttatcact gataagttgg tggacatatt atgtttatca gtgataaagt gtcaagcatg 6960
422 acaaagttgc agccgaatac agtgatccgt gccgcctgg acctgttgaa cgaggtcggc 7020
424 gtagacggtc tgacgacacg caaactggcg gaacggttgg gggttcagca gccggcgctt 7080
426 tactggcact tcaggaacaa gcgggcgctg ctgacgcac tggccgaagc catgctggcg 7140
428 gagaatcata cgcattcggg gccgagagcc gacgacgact ggcgctcatt tctgatcggg 7200
430 aatgcccga gcttcaggca ggcgctgct gcctaccgcg atggcgcgcg catccatgcc 7260
432 ggcacgcgac cgggcgcacc gcagatggaa acggccgacg cgcagcttcg cttcctctgc 7320
434 gaggggggtt tttcgccgg ggacgcgcgc aatgcgtgta tgacaatcag ctacttact 7380
436 gttggggccg tgcttgagga gcaggccggc gacagcagtg ccggcgagcg cggcggcacc 7440

```

RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 07/19/2005

PATENT APPLICATION: US/10/541,750

TIME: 15:19:22

Input Set : A:\Final Sequence list-13311-00009-US.txt

Output Set: N:\CRF4\07192005\J541750.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 267,475,566
Seq#:3; N Pos. 3471,3679,3770
Seq#:4; N Pos. 227,318,526,8946,10028
Seq#:36; N Pos. 10264,10472,10563
Seq#:37; N Pos. 10264,10472,10563
Seq#:38; N Pos. 10264,10472,10563
Seq#:39; N Pos. 10264,10472,10563
Seq#:40; N Pos. 3471,3679,3770
Seq#:41; N Pos. 3471,3679,3770
Seq#:42; N Pos. 10264,10472,10563
Seq#:43; N Pos. 10264,10472,10563
Seq#:44; N Pos. 10264,10472,10563
Seq#:45; N Pos. 18970,19178,19269
Seq#:46; N Pos. 3471,3679,3770
Seq#:47; N Pos. 10264,10472,10563
Seq#:48; N Pos. 10264,10472,10563
Seq#:49; N Pos. 3471,3679,3770
Seq#:50; N Pos. 10264,10472,10563
Seq#:51; N Pos. 10264,10472,10563
Seq#:52; N Pos. 3,9
Seq#:53; N Pos. 3,6
Seq#:62; N Pos. 3471,3679,3770
Seq#:75; N Pos. 2694,4263

VERIFICATION SUMMARY

DATE: 07/19/2005

PATENT APPLICATION: US/10/541,750

TIME: 15:19:22

Input Set : A:\Final Sequence list-13311-00009-US.txt

Output Set: N:\CRF4\07192005\J541750.raw

L:17 M:270 C: Current Application Number differs, Replaced Current Application No
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:240
M:341 Repeated in SeqNo=2
L:304 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:3420
M:341 Repeated in SeqNo=3
L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:180
M:341 Repeated in SeqNo=4
L:3768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:10260
M:341 Repeated in SeqNo=36
L:4339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:10260
M:341 Repeated in SeqNo=37
L:4965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:10260
M:341 Repeated in SeqNo=38
L:5567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:10260
M:341 Repeated in SeqNo=39
L:5941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:3420
M:341 Repeated in SeqNo=40
L:6583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:3420
M:341 Repeated in SeqNo=41
L:7453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:10260
M:341 Repeated in SeqNo=42
L:8067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:10260
M:341 Repeated in SeqNo=43
L:8659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:10260
M:341 Repeated in SeqNo=44
L:9541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:18960
M:341 Repeated in SeqNo=45
L:9699 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:3420
M:341 Repeated in SeqNo=46
L:10663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:10260
M:341 Repeated in SeqNo=47
L:11281 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:10260
M:341 Repeated in SeqNo=48
L:11651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:3420
M:341 Repeated in SeqNo=49
L:12521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:10260
M:341 Repeated in SeqNo=50
L:13169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:10260
M:341 Repeated in SeqNo=51
L:13460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0
L:13483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:0
L:13721 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:3420
M:341 Repeated in SeqNo=62
L:14607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:2640
M:341 Repeated in SeqNo=75